

# Ontario's *Lake Partner* Program

*Four levels of participation*

*Your lake* Great Ontario Dip-In  
*needs* Lake Partner Basic  
*your help* Lake Partner Special  
Lake Partner Detailed

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# Four Levels of Participation

## Where and When

## What and Why

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### Great Ontario Dip-In

All lakes. Canada Day week around the July 1 holiday.

- One water clarity measurement using a secchi disc.
  - Provides a snapshot of water clarity across Ontario.
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### Lake Partner Basic

All lakes each year. One spring water sample, shortly after ice-out, and secchi disc readings at a minimum of every two weeks, all summer. Larger lakes may be sampled at more than one location.

- Total phosphorus and secchi disc readings provide long-term trend information between special program assessments.
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### Lake Partner Special

All limestone-based (non-Shield) lakes each year and a five-year cycle for selected Pre-Cambrian Shield regions. Secchi disc readings taken at least every two weeks all summer, along with six water samples.

- Same as Lake Partner Basic, enhanced with six water samples for total phosphorus analysis through the summer.
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### Lake Partner Detailed

Ministry staff with specialized equipment visit the lake. Limited to special cases, e.g. a municipality doing a lake remediation program, or to augment or enlarge on work done in the special program.

In co-operation with local volunteers, sampling is conducted every other week for up to 30 water chemistry tests along with biological sampling for a detailed lake health assessment.

## *Lake Partner Hotline*

1-800-470-8322

For additional information please refer to these other publications:

- The Great Ontario Dip-In
- Seven hints on protecting your lake

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Lake Partner Program  
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Our many partners include you and:

Federation of Ontario Cottager's Associations  
Lake Of the Woods Property Owners Association  
Ministry of Natural Resources  
District of Muskoka  
Kawartha Fisheries Association  
Laurentian University  
Muskoka Lakes Association

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# The Ontario Lake Partner Program

**T**he Ministry of the Environment (MOE) monitors trends and changes in Ontario's recreational lakes in partnership with cottagers and residents. The goal of the Lake Partner Program is to create a valuable, long-term database to track the nutrient enrichment (eutrophication) of Ontario's inland lakes. Annual trends will reflect land use changes around our lakes and in our watersheds and assist in our efforts to rehabilitate, conserve and protect our inland lakes.

Through the Lake Partner Program – which evolved from the 1971 Self Help Program – volunteers measuring water clarity and collecting water samples for analysis of total phosphorus contribute to MOE's nutrient enrichment database.

As a volunteer, you can take water samples for total phosphorus (TP) analysis and measure water clarity using a secchi disc. A secchi disc is a round, flat disc with alternating black and white quadrants that can be lowered into a lake to visually measure water clarity, indicated by the depth at which the disc disappears.



To volunteer, all you have to do is call MOE at 1-800-470-8322 for more instructions and your **Lake Partner** kit, including the secchi disc. If your lake is already being sampled, although you won't get the Lake Partner basic kit, you will still receive the data generated prior to the next season and you will receive a secchi disc and Great Ontario Dip-In kit.

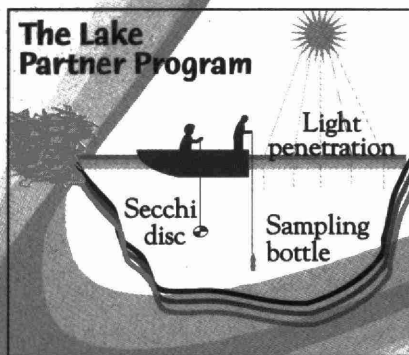
# Collecting water samples and measuring water clarity

**Secchi disc readings.** The Great Ontario Dip-In brochure provides information on making a secchi disc and registering measurements. For copies call 1-800-470-8322. To register a secchi or water clarity measurement, follow these simple steps:

- Anchor your boat over the deepest part of the lake.
- Lower your secchi disc over the side of the boat. It should be attached to a rope marked in metres. You will note that at a certain depth the disc disappears from view. This is your water clarity reading.
- Fax or mail the reading to the Lake Partner office. Two business reply envelopes are provided in the kit, one for the Great Ontario Dip-In reading and one for the collective end-of-season report.

A *water quality sample* is collected by filling a sample bottle with lake water and mailing it to the Lake Partner Program in the prepaid container.

- Attach your sample bottle to a weight and rope. Attaching your marked secchi disc rope to a hammer and taping the bottle to the hammer works very well.
- Lower the bottle through the water to a depth of twice your secchi disc (water clarity) reading.
- In shallow lakes, sample no closer than one metre off the bottom.



# Interpreting your water quality results - a basic summary

**T**he real value in monitoring your lake becomes obvious over a period of several years. You are not strictly focused on water quality at any given time, but trying to determine long-term water quality trends in the lake. Through long-term monitoring, we know the water quality of many lakes in the province has improved during the last 10 years.

Water clarity is an indirect measure of the algal density in the lake. Water clarity (algal density) is affected by total phosphorus (TP), the principal nutrient that makes lakes more fertile. Since algae are plants and TP is a fertilizer, more TP in the water will mean more algae and lower water clarity. By taking both TP and water clarity readings, we track two trends that confirm each other. If the TP reading is decreasing and the secchi disc reading is increasing, we can say that the lake is becoming less fertile, and that there is less potential for algal blooms and fouled water. Water clarity is also affected by swamp and watershed runoff. Some lakes are tea-colored because of this.

If the lake is getting more fertile and less clear, the fish community can change. For example, lake trout prefer the well oxygenated conditions of a really clear lake and may be harmed if the lake gets too fertile. But the issue is complex. If you would like to discuss it please call the Lake Partner office at 1-800-470-8322

Water clarity readings are grouped into three ranges, described in the table below.

Interpreting your water quality results		
Secchi disc reading	Total phosphorus levels	Lake condition
Over 5.0 m	Less than 10 µg/L	Oligotrophic (unenriched, with few nutrients)
3.0 to 4.9 m	11 to 20 µg/L	Mesotrophic (moderately enriched, with some nutrients)
Less than 2.9 m	21 µg/L or more	Eutrophic (enriched, with higher levels of nutrients)

*I want to get involved with Ontario's  
Lake Partner Program*

Lake name \_\_\_\_\_

Township \_\_\_\_\_

Nearest village or settlement \_\_\_\_\_

Your name \_\_\_\_\_

Address \_\_\_\_\_

Apt. \_\_\_\_\_

City \_\_\_\_\_

Province \_\_\_\_\_

Postal code \_\_\_\_\_

Phone number \_\_\_\_\_

Fax number \_\_\_\_\_

I am a member of a cottage association

Yes ☐

No ☐

Name of association \_\_\_\_\_

I am already a member of the Lake Partner Program

and I wish to participate again this year

Yes ☐

No ☐

Mail this form to:

Ministry of the Environment

Environmental Monitoring and Reporting Branch

Lake Partner Program

125 Resources Rd.

Toronto, ON

M9P 3V6

Phone 1-800-470-8322

Fax 416-327-6519





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